

VGLEKOV, Yu.V.; VOLKOVA, Z.A.; KAYGOROPTSEV, L.M.; BRASLAVSKIY,
V.M., kand. tekhn. nauk, retsenzent; KUMANIN, V.I.,
inzh., red.

[Durability of machines operating in an abrasive medium]
Dolgovechnost' mashin, rabotaiushchikh v abrazivnoi sre-
de. Moskva, Izd-vo "Mashinostroenie," 1964. 114 p.
(MIRA 17:6)

VOLKOVA, Z.A. (Moskva)

Ventilation of the sewing workshops of shoe factories. Gig. truda
i prof. zab. 4 no.4:52-55 Ap '60. (MIRA 15:4)

1. Kafedra promyshlennoy gigiyeny Tsentral'nogo instituta
usovershenstvovaniya vrachey i Institut gigiyeny truda i professional'-
nykh zabolevaniy AMN SSSR.

(SHOE INDUSTRY---HYGIENIC ASPECTS)
(FACTORIES---HEATING AND VENTILATION)

VOLKOVA, Z. I.; IVANOVA, S. N.; OZEROV, I. M.

Mineral wool from waste products of the oil shale industry.
Trudy VNIIT no. 11:211-217 '62. (MIRA 17:5)

RYSEVA, Ye.S., starshiy nauchnyy sotrudnik; VOLKOVA, Z.I., starshyy laborant

Functional state of the adrenal cortex in healthy and rheumatic children. Vop.okh.mat. i det. 8 no.2:11-16 F'63.
(MIRA 16:7)

1. Iz otdeleniya detskogo vozrasta (zav. - deystvitel'nyy chlen AMN SSSR prof. O.D. Sokolova-Ponomareva) i biokhimi-cheskoy laboratorii (zav. - doktor biolog. nauk A.A. Titayev) Instituta pediatrii (dir. - dotsent M. Ya. Studenikin) AMN SSSR.

(ADRENAL CORTEX) (RHEUMATIC FEVER)

PADUCHEVA, A.L.; VOLKOVA, Z.I.; FEOFILOVA, Zh.A.

Rate of formation of sulfur-containing precursors of hair keratin in the skin of sheep following the peroral administration of sulfate and methionine. Dokl. AN SSSR 148 no.5:1205-1206 F '63. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zhivotnovodstva Ministerstva sel'skogo khozyaystva SSSR. Predstavleno akademikom A.I. Oparinym.

(Keratin) (Sulfur isotopes) (Methionine)

VOIKOVA, Z. V.

1948. Cptt bor'ly s fasholelor oveta nater vneim-inal'nykh detal'rintitsiy.
"Veterinariya" IV, str. 25.

110

CA
VOLKOV, Z.M.

The precipitation of the toxin of *Clostridium welchii* with ammonium sulfate in the presence of native proteins.
Z. M. Volkov. Z. *Microbiol. Epidemiol. Immunol. Infekt.* (U. S. S. R.) 10, 722-3 (in German 723) (1933).
The addn. of 1-1.5% of normal horse serum to the toxic filtrate of *Cl. welchii* before pptn. with (NH₄)₂SO₄ gives a higher yield of toxin. The strength of the toxin is slightly less than that pptd. without the addn. of serum, but this is compensated for by the 3.3 times higher yield obtained.
S. A. Karjala

ASB 31.4 METALLURGICAL LITERATURE CLASSIFICATION

VOLKOVA, Z. M.

Central Inst. of Epidemiology and Microbiology, (-1944-)

"Active immunization against gas gangrene. (B. perfringens),"

Zhur. Mikrobiol., Epidemiol., i Immunobiol., No. 9, 1944.

VOLKOVA, Z. M.

Multipurpose antitoxin for immunization against anaerobic infections. G. V. Vygodchikov, S. A. Zalevinskaya, Z. M. Volkova, N. S. Kashintseva, B. A. Gil'gut, R. V. Vlasova, Z. V. Bulanova, V. A. Elagoveshchenskii, L. Ya. Marmalevskaya, A. P. Kuz'mina, and I. N. Viugradova. U.S.S.R. 103,907, Nov. 25, 1956. Cultures of the corresponding pathogenic anaerobes are grown separately on a casein-vegetable nutrient medium obtained by hydrolysis with mushroom protein. The toxin is filtered, detoxicated, freed of accompanying protein, and concd. by pptn. in an acid medium. The anatoxin ppt. thus formed is sepd. by centrifuging, dissolved in a phosphate buffer, adsorbed on Al_2O_3 , washed, sterilized, checked for safety and immunizing power, and the several antitoxins combined. M. H.

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MATVEYEV, K.I., professor; SOLOV'YEV, S.V., kandidat meditsinskikh nauk;
VOLKOVA, Z.M., kandidat meditsinskikh nauk (Moskva)

Epidemiology of tetanus. Fel'd. i akush. 21 no.2:19-21 F '56.
(TETANUS) (MLBA 9:5)

USSR/Microbiology - Sanitary Microbiology.

F-3

Abs Jour : Ref Zhur - Biol., No 12, 1958, 52819
Author : Matveyev, K.I., Solov'yev, S.V., Volkova, Z.M.
Inst : -
Title : Inoculation of Soil by Cl. Tetani and Tetanus Infection.
Orig Pub : Zh. mikrobiol., epidemiol. i immunobiologii, 1957, No 3,
54-58.

Abstract : Samples were taken from streets, yards, gardens, beaches, markets, and plowed fields from a depth of 10-15 cm. 3-5 g of soil was weighed in 8-15 ml of a physiological solution, and after 3-4 hours it was injected into mice under the skin of the hind paw in a quantity of 1 ml. In the Krasnodar region, of 192 samples taken from fields and gardens, tetanus bacilli (TB) were found in 29%; from 195 samples collected from streets and squares-- in 20%. In this region during 1945-1949 120-125 men were stricken annually by tetanus. In the Turkmenian SSR, TB were

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USSR/Microbiology - Sanitary Microbiology.

F-3

Abs Jour : Ref Zhur - Biol., No 12, 1958, 52819

isolated in 19% of 182 samples. The occurrence of the disease in this republic during 1945-1949 comprised 16-21 cases annually. In the Moscow region, of 200 samples, TB were found in 3-6%, and the occurrence of the disease in 1945-1949 was 7-9 cases annually. Most frequently affected by tetanus are children of 1 to 15 years old (31 to 54%), kolkhoz farmers, workers of sovkhoses and machine-tractor units. The majority of infections occur during the summer-autumn season (74-90%). Entering wedges of infection in 70-80% of cases are small ordinary wounds not needing medical treatment. Fatal results from tetanus reached 26.7-41.8%. In order to liquidate tetanus completely in regions whose soil is abundantly inoculated by TB, the author recommends conducting of active immunization of all kolkhoz farmers, workers of machine-tractor units and sovkhoses, as well as children. -- Yu.Z. Gondon

Card 2/2

VOLKOVA, Z. M.

USSR / Microbiology. Microbes Pathogenic for Man and Animals. Bacteria. Anaerobic Bacilli. F

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 24095

Author : Vygodchikov, G. V.; Volkova, Z. M.; Zelevinskaya, S. A.; Larina, I. A.

Inst : Not given

Title : The Significance of Antitoxic and Antibacterial Factors in Active Immunity Against Experimental Gas Gangrene Induced by B. perfringens

Orig Pub : Zh. microbiol., epidemiol. i immunobiol., 1957, 10, 120-125

Abstract : Animals were immunized with a concentrated, purified, sorbed anatoxin (CSA) of B. perfringens, with various protein fractions of microbe bodies of B. perfringens of type

Card 1/3

USSR / Microbiology. Microbes Pathogenic for Man and
Animals. Bacteria. Anaerobic Bacilli.

F

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 24095

"A", obtained according to the method of Kholchav, and a mixture of anatoxin with microbe fractions. I microbe fraction, which contained traces of toxin, induced the formation of an insignificant amount of antitoxin and agglutinins and a considerable amount of precipitins and complement-fixation antibodies. II and III microbe fractions, which did not contain toxin, did not induce the accumulation of antitoxin. The majority of animals of these groups turned out to be resistant to infection with 1 Dcl of spore culture of *B. perfringens*, that is, as a result of immunization with microbe fractions, anti-bacterial immunity had developed. In

Card 2/3

USSR / Microbiology. Microbes Pathogenic for Man and
Animals. Bacteria. Anaerobic Bacilli.

F

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 24095

immunization with CSA separately, or in a mixture with protein microbe fractions of antitoxin and bacterial antibodies formed in all rabbits. All rabbits turned out to be resistant to infection with a lethal dose of spore culture of *B. perfringens*. According to the authors, the antitoxin is the basic defensive factor in immunity against gas gangrene induced by *B. perfringens*. Anti-bacterial factors play a secondary role. --
E. R. Paley

Card 3/3

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VOLKOVA, Z.M.; ZELEVINSKAYA, S.A.

Immunizing properties of purified concentrated adsorbed $Al(OH)_3$
antoxins of *Clostridium perfringens*. Zhur.mikrobiol.epid. i immun.
28 no.4:77-82 Ap '57. (MLA 10:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Koval'skoi AN
SSSR.

(*CLOSTRIDIUM PERFRINGENS*, immunol.
immunizing properties of purified concentrated adsorbed
antoxin)

VOLKOVA, Z.M.

MATVEYEV, K.I.; SOLOV'YEV, S.V.; VOLKOVA, Z.M.

Epidemiology of tetanus [with summary in English]. Khirurgiia 33
no.9:80-85 S '57. (MIRA 11:4)

1. Iz Instituta epidemiologii, mikrobiologii imeni pochetnogo
akad. N.F.Gamalei AMN SSSR.
(TETANUS, epidemiol.)

LARINA, I.A.; VOLKOVA, Z.M.; ZELEVINSKAYA, S.A.

Effect of antibiotics in experimental gas gangrene. Zhur.
mikrobiol.epid. i immun. no.1:119-124 Ja '58. (MIRA 11:4)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei
AMN SSSR.

(ANTIBIOTICS, effects,

on gas gangrene pathogens (Rus)

(GAS GANGRENE, microbiology,

eff. of antibiotics on various pathogens (Rus)

VOLKOVA, Z. M.

USSR / Microbiology. Microbes Pathogenic for Man and Animals. Bacteria. Anaerobic Bacilli. F

Abs Jour : Ref Zhur - Biologiya, No 6, 1959, No. 24111

Author : Koroleva, G. A.; Matveyev, K. I.; Volkova, Z. M.

Inst : Not given

Title : Obtaining Bi- and Polyvalent Antibotulin Sera of Types A, B, C, E from Horses. Report II

Orig Pub : Zh. mikrobiol., epidemiol. i immunobiol., 1958, No 5, 83-87

Abstract : No abstract given

Card 1/1

LARINA, I.A.; VOLKOVA, Z.M.

Anatoxin from *Vibrio septicus* and its antigenic and immunogenic properties. Zhur.mikrobiol.epid. i immun. 29 no.3:77-82 Mr '58.
(MIRA 11:4)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(CLOSTRIDIUM,
septicum, anatoxin, antigenic & immunogenic properties (Rus)

Volkova, Z.M.

KOROLEVA, G.A.; MATVEYEV, K.I.; VOLKOVA, Z.M.

Production of therapeutic antitoxin C and E sera in horses. Report
No.1. Zhur.mikrobiol.epid. i immun.29 no.3:102-106 Mr '58.
(MIRA 11:4)

(BOTULISM, immunology;
immun. sera, prod. on horses (Rus))

VYGODCHIKOV, G.V. and VOLKOVA, Z.M.

"Active Immunization with Combined Preparations."

report presented at the Intl Symposium of Immunology, Yugoslavia, 28 Sep - 1 Oct, 1959.

VOLKOVA, Z.M.; VYGODCHIKOV, G.V.; KORN, M.Ya.; GIL'GUT, Ya.A.; SAMSONOVA, V.S.;
SCLAV'YEV, N.N.

Toxinogenesis of *Clostridium perfringens*. Report No.1: Study of
the morphology of *Clostridium perfringens* and the dynamics of
toxin formation on semisynthetic nutritive media. Zhur. mikro-
biol., epid. i immun. 41 no.12:43-48 D '64.

(MIRA 18:3)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

L 62620-65 EWT(1)/EWA(j)/EWA(b)-2 JK.
ACCESSION NR: AP5011289 UR/0016/65/000/004/0137/0141

AUTHOR: Samsonova, V. S.; Volkova, Z. M.; Shamrayeva, S. A.;
Tsurikov, F. F.; Solov'yev, N. N.

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B

TITLE: Dynamics of the redox potential (rH₂) and morphology of a
Cl. perfringens culture during toxin formation in a semi-synthetic
nutrient medium

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii,
no. 4, 1965, 137-141

TOPIC TAGS: *Cl. perfringens*, toxin, bacteriologic culture method,
redox potential, reducing agent, pH, nutrient medium, gangrene,
tetanus, botulism

ABSTRACT: The effect of the redox potential (rH₂) on *Cl. perfringens*
(strain No. 28-BP6K) multiplication and toxin formation was
investigated in a semi-synthetic nutrient medium. Following
sterilization of the medium in a 3 liter flask, glucose (0.5%) was
added and a rubber stopper with 2 platinum electrodes and several
tubes replaced the cotton stopper. The electrodes were immersed in

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L 62620-65

ACCESSION NR: AF5011289

the medium at a depth of 10 cm, and 30 min later the initial potential and pH values of the nutritive medium were determined. *Cl. perfringens* cultures were then placed into the medium and thermostated for 24 hrs. Culture samples were taken 30 min, 1 and 2 hrs later to determine pH values by an LP-5 potentiometer, toxin strength by titration on white mice, and redox potential by an electrical method. Platinum electrodes connected electrolytically to a standard calomel electrode were connected in series to a potentiometer. Also, the effects of reducing agents (thioglycolic acid, sodium sulfite, and sodium hydrosulfite) added to the medium in .05% amounts were studied. Findings show that *Cl. perfringens* multiplication and toxin formation take place at a definite redox potential (rH₂ 10.0-12.0) which is established in the culture after 4-5 hrs of growth. With the addition of reducing agents, multiplication and toxin formation take place in 2-3 hrs. Parallel to the redox potential changes, the *Cl. perfringens* bacilli undergo significant morphological changes. To produce potent *Cl. perfringens* toxins, the nutrient medium should have a low initial redox potential (rH₂ 14) which is achieved with the addition of reducing agents (thioglycolic acid, sodium sulfite, and sodium hydrosulfite).

Card 2/3

L 62620-65

ACCESSION NR: AP5011289

Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Institut epidemiologii i mikrobiologii im. N. F. Gamalei AMN SSSR (Institute of Epidemiology and Microbiology AMN SSSR)

SUBMITTED: 25Mar64

ENCL: 00

SUB CODE: LS

NR REF 301: 000

OTHER: 000

llc
Card 3/3

SHAMRAYEVA, S.A.; VOLKOVA, Z.M.; SAMSONOVA, V.S.

Standardization of perfringens toxins and anatoxins in tissue culture. Zhur. mikrobiol., epid. i imm. 43 no. 1:138-141 (MIRA 19:1) Ja '66.

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
Submitted August 12, 1964.

L 27114-66 EWT(1)/T JK

ACC NR: AP6017461

SOURCE CODE: UR/0016/66/000/001/0138/0141

23
B

AUTHOR: Shanrayeva, S. A.; Volkova, Z. M.; Samsonova, V. S.

ORG: Institute of Epidemiology and Microbiology im. Gamaleya, AMN SSSR (Institut epidemiologii i mikrobiologii AMN SSSR)

TITLE: Standardization of Clostridium perfringens toxins^b and toxoids^b in tissue cultures^b

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 1, 1966, 138-141

TOPIC TAGS: mouse, immunology, bacteriology

ABSTRACT: Comparative in vivo and in vitro titration experiments were performed to study the sensitivity and uniformity of the tissue culture method of measuring the activity of toxins and toxoids. Fifteen different tissue cultures were used. A marked cytotoxic effect on a chick fibroblast culture was observed when toxins were present in filtrates of bouillon cultures of Cl. perfringens prepared on culture media from a base of pancreatic or fungal (aspergillus terricola) hydrolysate of casein. This effect was not observed when the toxin was broken down or neutralized. Titration of perfringens toxin in a chick fibroblast culture by its cytotoxic effect in a test that is just as sensitive as titration in white mice, if not more sensitive, and considerably more uniform. But the most sensitive proved to be the method of measuring toxin activity by the reaction of opalescence with a solution of lecithovitellin. In measurement of the antitoxin-fixation capacity of perfringens toxoids on tissue cultures, full coincidence was observed in results of titration on white mice and on a tissue culture of chick fibroblasts. Orig. art. has: 3 tables.

2

SUB CODE: 06 / SUBM DATE: 12 Aug 66 / ORIG REF: 002 / OTH REF: 001 [JPRS]
UDC: 576.851.355.097.29.078.2
Card 1/16

L 20997-66 EWT(1)/T RO/JK

ACCESSION NR: AP5021649

UR/0218/65/030/004/0675/0680
577.17

AUTHOR: Mayorova, I. P.; Blagoveshchenskiy, V. A.; Volkova, Z. M.;
Orlova, N. G.

13

B

TITLE: Dynamics of phosphorous compounds in the process of Cl. perfringens development

SOURCE: Biokhimiya, v. 30, no. 4, 1965, 675-680

TOPIC TAGS: fungus, toxicology, phosphorous compound/BP6K toxigen, 2836 toxigen

ABSTRACT: The object of the article was to study the special characteristics of the metabolism of phosphorous compounds in Cl. perfringens in connection with the formation of toxins. Test materials were strain BP6K toxigen and the weak toxigen No. 2836. A partially synchronized culture of Cl. perfringens was obtained as follows. A fresh culture, containing $2 \cdot 10^9$ living microbic cells per ml, was planted in 500 ml of a medium with the following composition (heated to 37C): casein hydrolyzate obtained from the fungus Aspergillus terricola: NaHPO_4 2.3 gram/liter; MgSO_4 0.02 gram/liter; KH_2PO_4 0.25 gram/liter; lumps of muscle 33 grams/liter; and, glucose 0.5%. A culture with $5 \cdot 10^9$ cells per 500 ml was introduced into the medium and placed in a thermostat at 37C. After 15 min of

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L 20997-66

ACCESSION NR: AP5021649

development, an equal volume of fresh medium cooled to 0-2C, was rapidly added to the culture and the temperature dropped to 20-22C, after which it was again placed in a thermostat at 37C. Microscopic analysis showed that, after cooling, the cells ceased to divide but continued to grow, increasing in size by 2-3 times. A study was made of the behavior of phosphorous compounds during these operations. It was shown that the separating out of toxins in cultures of strain C1: perfringens toxigen is connected with a change in the phosphorous containing compounds and that it is accompanied by an expenditure of energy. During the process of cell division and of the separating out of toxin in the bacteria of the toxigen, the content of phosphorous compounds decreases sharply. Microbes of a toxigen before the start of separation have the capacity to accumulate a greater amount of phosphorous compounds than microbes of a nontoxigen. "The authors wish to thank I. S. Kulayev and M. S. Kritskom for consultation on the work."

Orig. art. has: 3 tables

ASSOCIATION: Institut epidemiologii i mikrobiologii im. N. F. Gamalei Akademii meditsinskikh nauk SSSR, Moscow (Institute of Epidemiology and Microbiology, Academy of Medical Sciences of the SSSR)

Card 2/3

L 20997-66

ACCESSION NR: AP5021649

SUBMITTED: 21Jan64

ENCL: 00

SUB CODE: LS, 10

NR REF SOV: 004

OTHER: 004

Card

3/3

BK

L 40745-65 EWA(1)/EWA(j)/EWA(b)-2 JK
ACCESSION NR: AP5012392

UR/0016/64/000/012/0043/0048

AUTHOR: Volkova, Z. M.; Vygodchikov, G. V.; Korn, M. Ya.; Gil'gut, Ye. A.;
Samsonova, V. G.; Solov'yev, N. N.

21
26
B

TITLE: Toxinogenesis of Ci. perfringens, I. A study of the morphology of Ci. perfringens and the dynamics of toxin formation on semisynthetic culture media

SOURCE: Zurnal mikrobiologii, epidemiologii i immunobiologii, no. 12, 1964, 43-48, and insert facing p. 44

TOPIC TAGS: toxicology, bacteria, bacteriology, morphology

ABSTRACT: The authors compared live and fixed Ci. perfringens cells under various conditions of fluorochromation and thus determined the optimum staining conditions. They found that chromatin elements and cytoplasmatic RNA could be detected in Ci. perfringens cells after fluorochromation with acridine orange; the differences between the live and fixed cells with respect to the morphology of the chromatin elements were noted.

Changes were noted in the morphology of the bacterial cells during different periods of growth. Toxin accumulated at the time of greatest multiplication of the culture and continued throughout the logarithmic growth phase.

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L 40745-65

ACCESSION NR: AP5012392

Analysis of the data tentatively reveals that the release of Cl. perfringens toxin into the culture medium is related to active multiplication of the microbial cells. Further study is needed on the relationship between microbial structure and function - toxin production. This work is the first effort to link the cytological characteristics of Cl. perfringens structure with the process of toxin production.

It was found that the addition of acridine orange to the medium slowed the multiplication of Cl. perfringens cells during continuous growth and inhibited the production of toxin. Orig. art. has 2 figures and 1 graph.

ASSOCIATION: Institut epidemiologii i mikrobiologii im. Gamalei AMN SSSR
(Institute of Epidemiology and Microbiology, AMN SSSR)

SUBMITTED: 09Mar65

ENCL: 00

SUB CODE: L3

NO REF SOV: 006

OTHER: 005

JPRS

Card

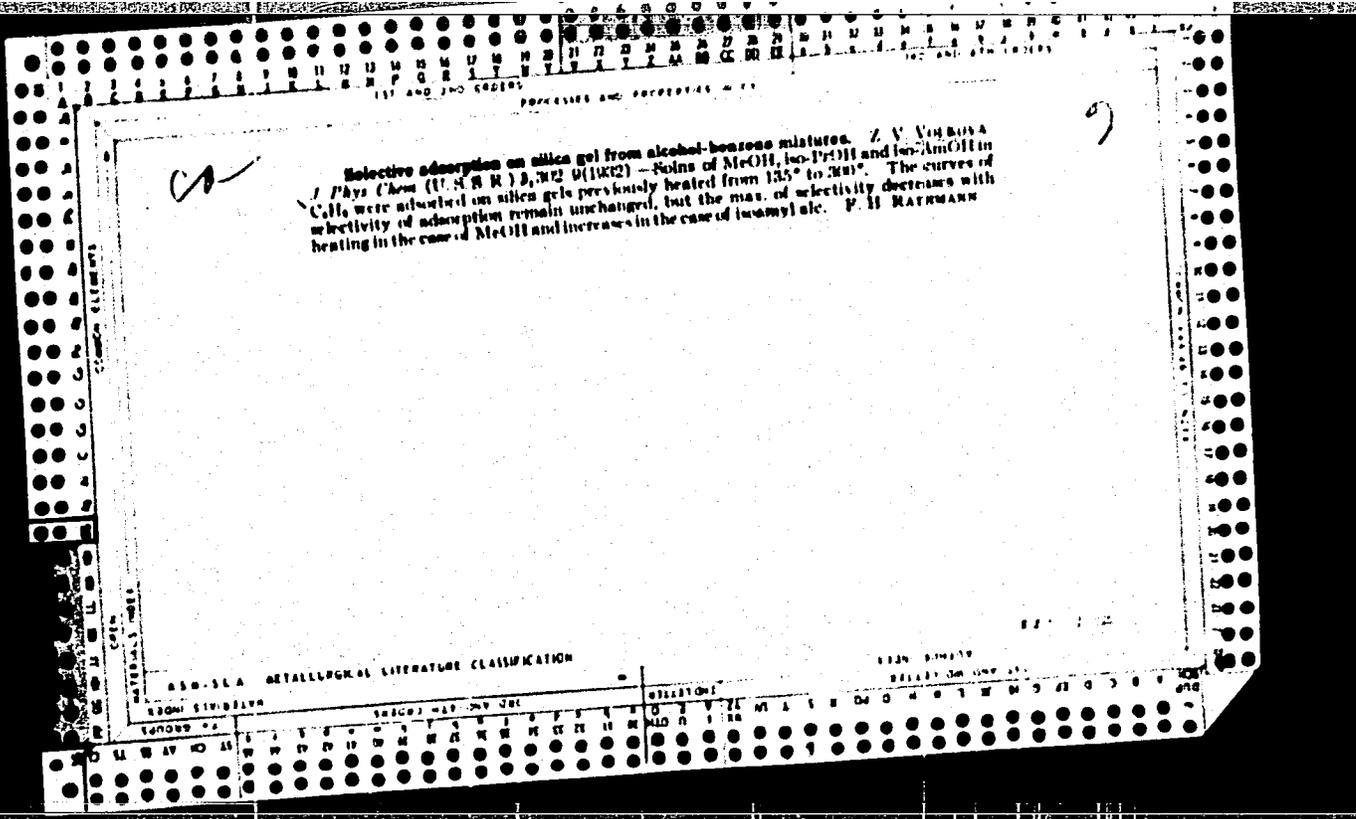
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2/2

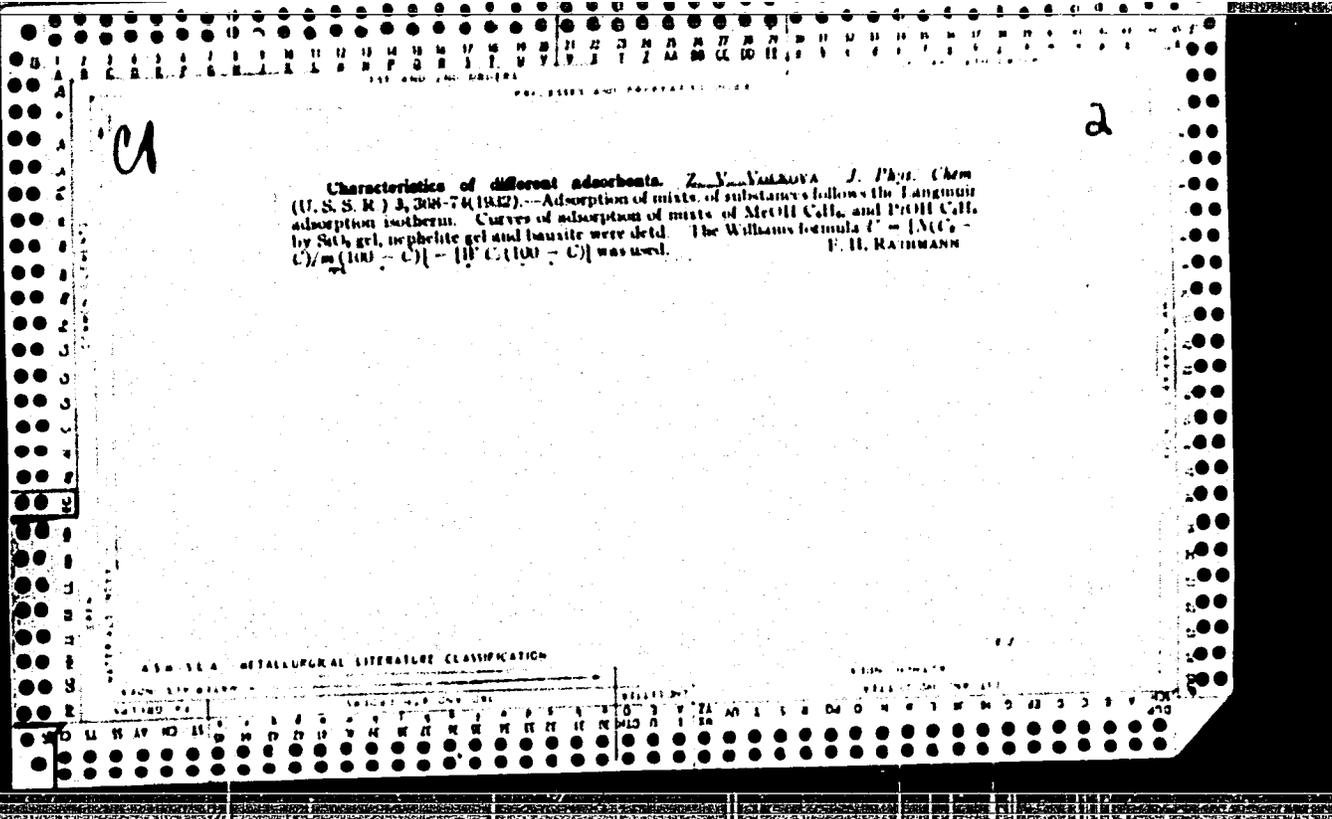
Adsorption of a series of alcohols by charcoal from water solutions and the phenomenon of ultra-porosity. Z. V. Volkova. *J. Phys. Chem.* (U. S. S. R.) 2, 702-4 (1941).—Data are given for adsorption isotherms for Me, Pr, iso-Pr, Bu, iso-Am and heptyl alcs. Traube's law applies. Relative effective surfaces were 720, 480, 370, 230, and 37 sq m./g., resp. The equation $S = A_0/\Gamma_n$ holds. F. H. Rathmann

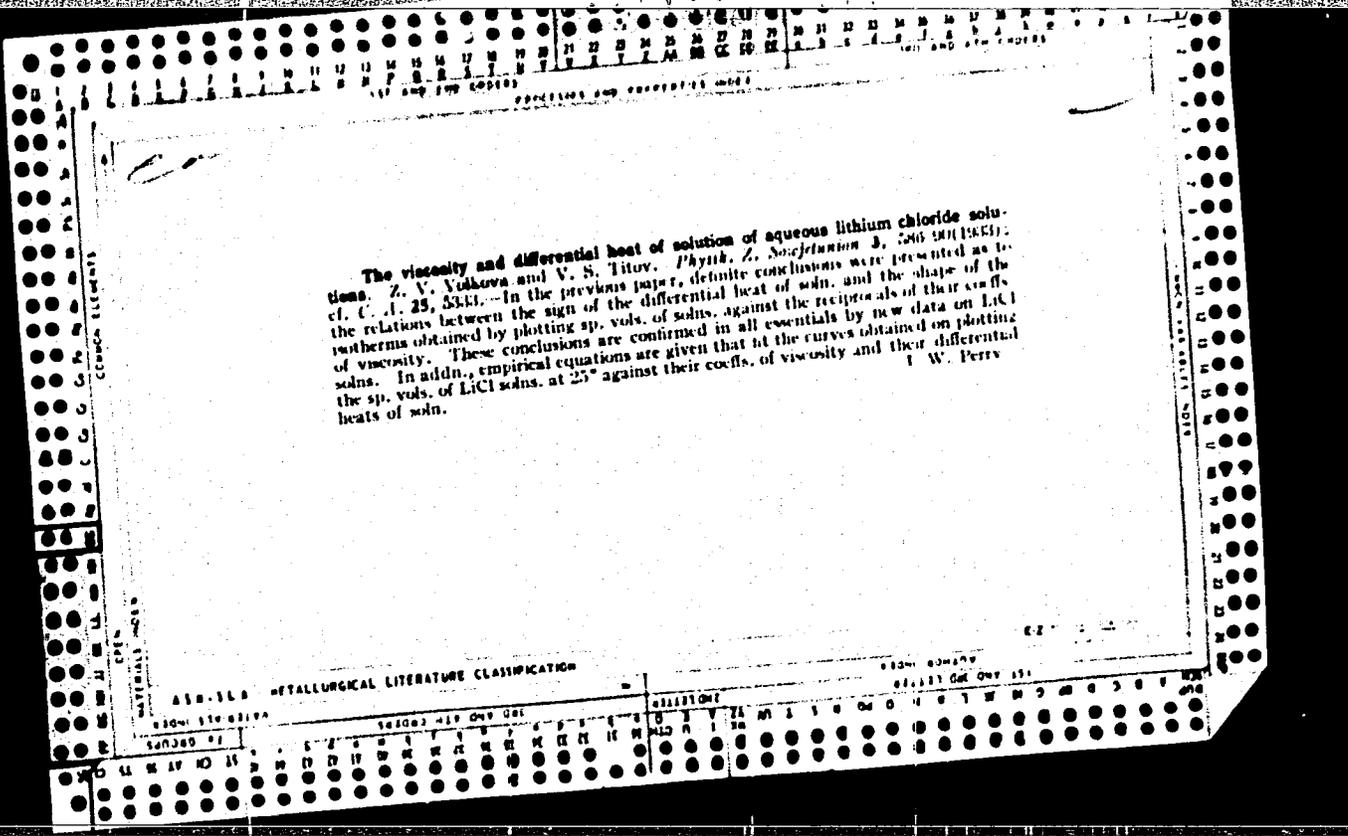
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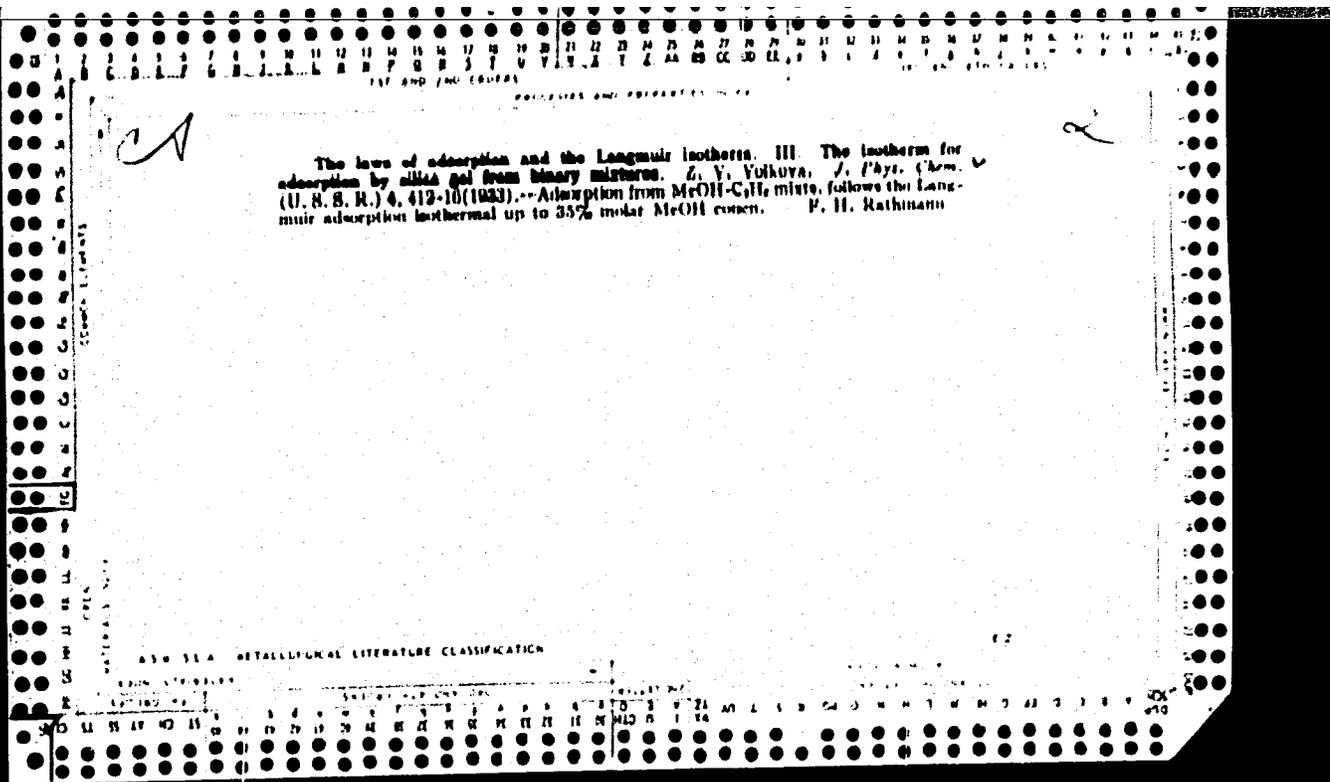
MATERIALS INDEX

430-55A METALLURGICAL LITERATURE CLASSIFICATION









PROCESS AND PROPERTIES INDEX

A-1

BC

Introduction, method for the investigation of
 the wetting power of mineral dispersions. Con-
 sideration of the wetting power of cerium powder.
 V. V. Voznyy, *Acta Physicochim. U.R.S.S.*, 1934,
 2, 107-110. An experiment is described for measuring
 the wetting power of dispersions of liquids into the
 pores of solids by the observation of changes with large
 contact angles. Results for the penetration
 of H₂O and PhMe into cerium powder are recorded
 and discussed. J. W. S.

METALLURGICAL LITERATURE CLASSIFICATION

GROUP	SECTION	SUBSECTION	ALPHA	BETA	GAMMA	DELTA	EPSILON	ZETA	ETA	THETA	IOTA	KAPPA	LAMDA	MU	NU	Xi	OMICRON	PICHA	RHO	SMALL SIGMA	TAU	UPSILON	PHI	CHI	PSY	OMEGA

PROCESSES AND PROPERTIES INDEX

17

Ca

Mechanism of flotation with water-insoluble reagents.

I. Function of nonpolar phase in the process of adsorption of a reagent on the suspension particles. Z. V. Volkova and N. N. Serb-Serbina. *Mineral Suite's* 9, No. 10, 19-24 (1934).—Lab. expts. with the flotation of powd. barite and fluorsite in H₂O with the aid of a soln. of oleic acid in toluene (I) showed that the results are greatly influenced by the proportion of the nonpolar phase (II) and the concn. of the flotation reagent dissolved in it. A microscopic study of such a 4-phase system with small proportion of I to that of H₂O displayed, with small quantities of highly dispersed barite or fluorsite, Brownian-like movements of the mineral particles covering the bubbles of the air emulsion. This process of unification of mineral particles with air bubbles is probably caused by the agglutination analogous to the coagulation (cf. Talmud, *C. A.* 27, 2110; Rebindey, *C. A.* 28, 1900). The assumption is made that in the 4-phase system obtained with very small ratio of the vols. of I and H₂O (V₁/V₂ equal to about 10⁻⁴), the adsorption of the polar phase proceeds from the binary mixt. of water and dissolved I, whereby the content of I in H₂O is replenished by the solvation of the emulsion droplets which lose the reagent on contact with the mineral particles. Because of the low concn. of the nonpolar component, it is almost completely extd. from H₂O. Thus the optimum conditions of flotation are detd. by the selection of the amts. of a reagent and the nonpolar phase. Chas. Blanc

ASM-55A METALLURGICAL LITERATURE CLASSIFICATION

FROM 1930 TO 1939

FROM 1940 TO 1949

FROM 1950 TO 1959

FROM 1960 TO 1969

FROM 1970 TO 1979

FROM 1980 TO 1989

FROM 1990 TO 1999

FROM 2000 TO 2009

FROM 2010 TO 2019

FROM 2020 TO 2029

FROM 2030 TO 2039

FROM 2040 TO 2049

FROM 2050 TO 2059

FROM 2060 TO 2069

FROM 2070 TO 2079

FROM 2080 TO 2089

FROM 2090 TO 2099

FROM 2100 TO 2109

FROM 2110 TO 2119

FROM 2120 TO 2129

FROM 2130 TO 2139

FROM 2140 TO 2149

FROM 2150 TO 2159

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PROCEDURES AND PROPERTIES

u-1

BC

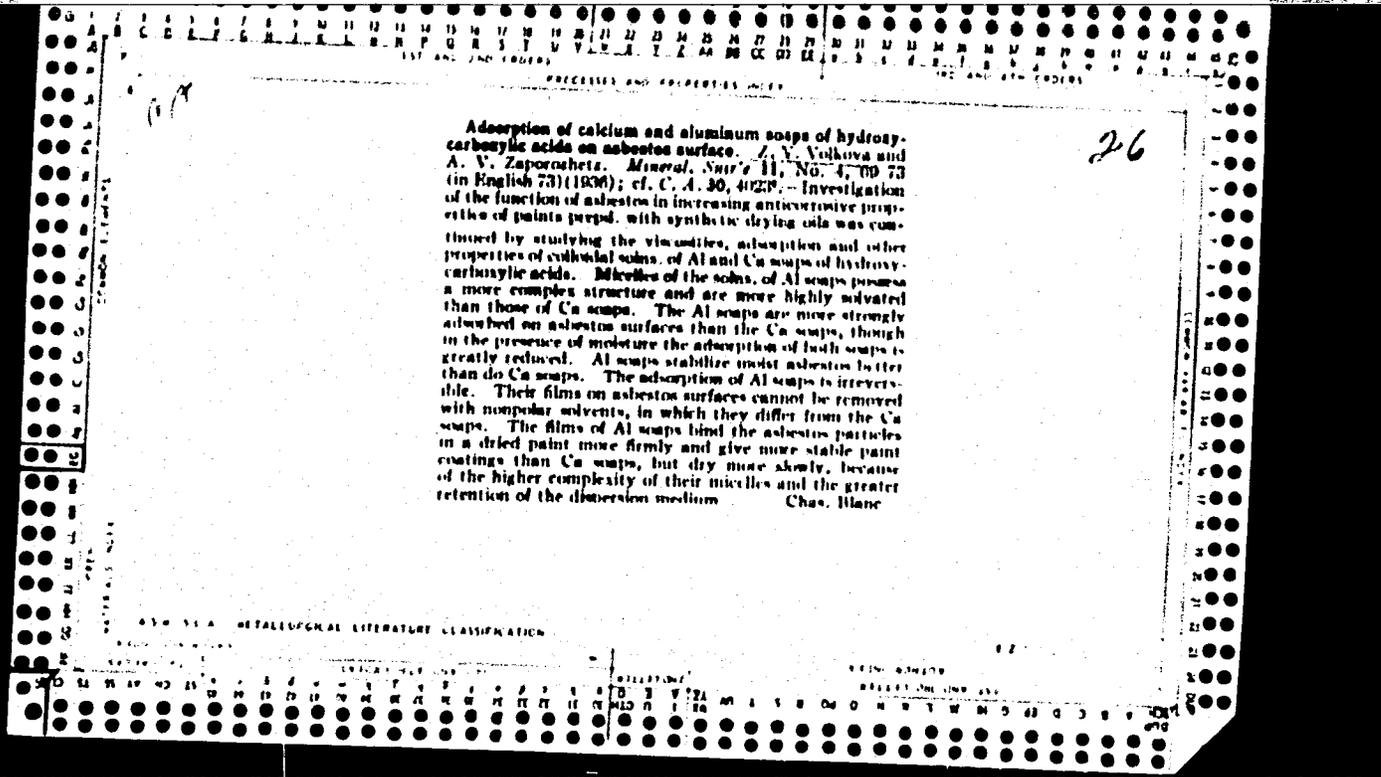
Wetting power of powders of different degrees of dispersion. Z. V. YOLKOVA (Acta Physicochim. U.R.S.S., 1958, 6, 688-689; cf. A., 1955, 1071).—The velocity of wetting by H₂O and PhMe of powdered quartz (I), calcite (II), kieselguhr (III), and corundum (IV) of different degrees of dispersion has been measured. The ratio r/r_0 of the penetration radii for H₂O and PhMe, respectively, remains const. for (I) and (II) at medium dispersion, but falls at high dispersions. This decrease is ascribed to the formation of H₂O layers between the particles. r/r_0 for (III) and (IV) decreases with decrease in particle size. For particles covered with an adsorbed layer of oleic acid r/r_0 decreases to 0 when the surface is only partly covered with acid. O. D. S.

A 18-11 A METALLURGICAL LITERATURE CLASSIFICATION

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CLASSIFICATION

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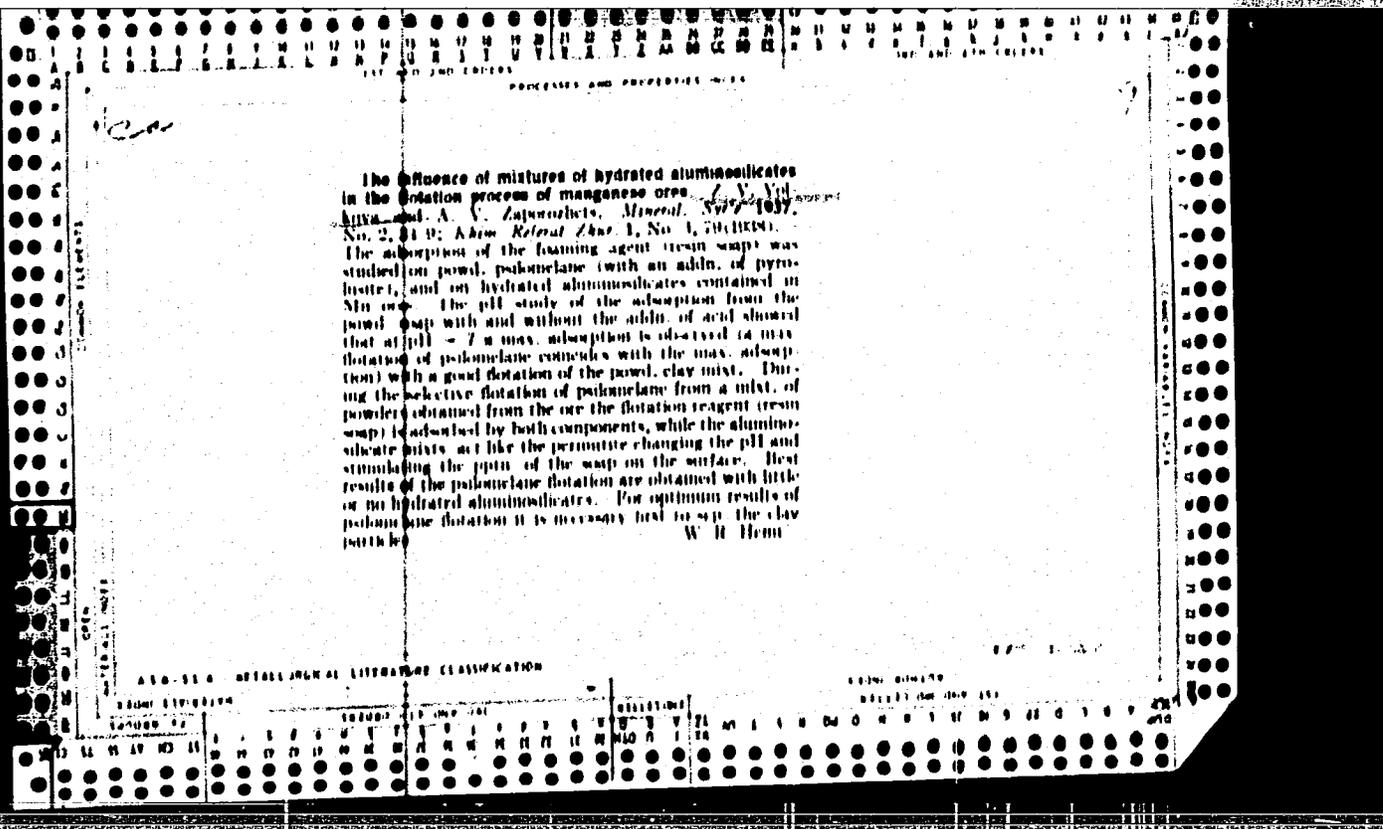
ca

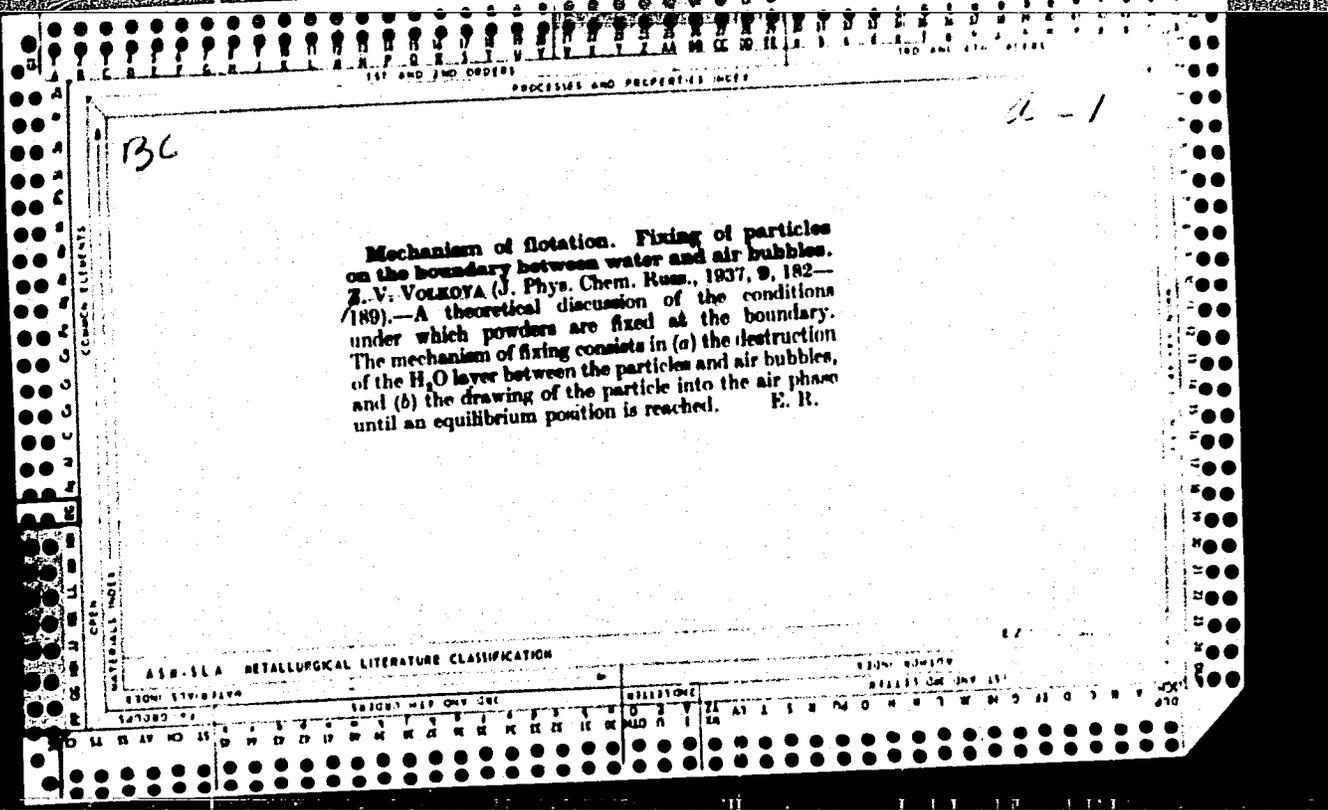
13

The strengthening of the action of fillers. Z. V. Vol-
kova and N. M. Solovnyakova. *Mineral. Syr' 11*, No. 7,
51-6(1930).—Molded plates composed of various powd.
minerals (marshallite, calcite and barite) and such binders
as shellac with and without addns. of asphalt, bakelite and
rosin were tested by the Kuznetsov friction-pendulum
method as modified by Rehinder (C. A. 27, 2811; *J.*
Phys. Chem. (U. S. S. R.) 8, 333(1934)). The strength of
microfilms is a function of the quantity of the binder
absorbed, reaching a max. at the satn. of cocon. The
binding properties of shellac are lowered by addns. of
asphalt and rosin. Activation of fillers by addition of
surface-active materials in the production of plastic
moldings. *Ibid.* Nov. 4-9, 44-7.—The mech. strength
of films, composed of mineral fillers and 20-30% shellac,
was considerably increased by addn. of aniline, *p*-toluidine
and diphenylamine, and decreased by addn. of stearic acid.
Chav. Illus.

AS M-51 A METALLURGICAL LITERATURE CLASSIFICATION

145380 01





PROCESSING AND PROPERTIES INDEX

A-1

BC

Wettability of solids as a characteristic property of the molecular nature of their surfaces. A new method for its measurement. Z. V. Voskova (J. Phys. Chem. Russ., 1939, 13, 224-236).—The contact angle θ of drops of H_2O on talc was measured directly and calc. from the dimensions of the drop. On a fresh surface θ was $\sim 80^\circ$, and in 2 days decreased to 15° . This alteration of θ is interconnected with the passage of Mg^{++} from talc into H_2O , which was also measured. J. J. B.

All-Union Inst. of Mineral Raw Materials

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

SECTION NUMBER

SECTION SYMBOL

COLLECTION

SERIAL NUMBER

VOLKOVA, Z. V.

The All-Union Institute of Mineral Raw Materials, (-1939-).

"The Attachment of Particles of Minerals to the Surface of Air Bubbles during Flotation."

Zhur. Fiz. Khim., Vol. 14, No. 5-6, 1940.

A.C.S.

U.S. Bureau

Electroconducting materials from bentonitic clays. 7.
V. V. VASILEVA. *Vysokh Elektroprov.*, 1961, No. 2, p. 34;
Khim. Referat. Zhur., 6 (9) 110 (1961). 34 No.

PROCESSED AND PREPARED BY

17

Law of adhesion in flotation. Z. Velhova (Acta Physicochim. U.R.S.S., 1945, 20, 447-478).—Theoretical. The relations between size of air bubbles and mineral particles and contact angles and their influence on the formation of mineralised bubbles are discussed on the basis of experimental data (cf. A., 1932, 1939 and subsequently). A table giving bubble dimensions for varying contact angles (5-30°) and varying diameters of adhesion circles (0.0075-0.08 cm.) is reproduced. Calculations show that very large or very small particles are not floatable. For particles of very large size the process of flotation with formation of mineralised bubbles easily passes to floccule flotation; the floating power of the floccules is small compared with that of mineralised bubbles, so floccule flotation cannot be effective. Small particles can be fixed only at the surface of very small bubbles. When the quantity of bubbles of suitable size is insufficient no flotation can occur; larger bubbles tear off the surface of small particles even if three-phase boundaries have already been formed.

C. R. H.

DETAILED LITERATURE CLASSIFICATION

SEARCHED	INDEXED	SERIALIZED	FILED
APR 1950	APR 1950	APR 1950	APR 1950

PROCESSES AND PROPERTIES INDEX

1

B

01. Mineral Contents of Bubbles During Flotation. Z. V. Volkova, *Engineers' Digest* (American Edition), v. 4, June 1947, p. 295. Translated and abstracted from *Gornii Journal* (U.S.S.R.), no. 3, 1946, p. 30-35.

Outlines new method for determining the above, based on time of induction, wetting characteristics of mineral surfaces, speed with which the bubble is rising and size of the bubble, ratio of the mineral to be floated to other solid contents, and size of mineral particles. A short outline of the theory, with several graphs and tables, is given, illustrated by experimental results for a mixture of quartz and barite.

A 58-31A METALLURGICAL LITERATURE CLASSIFICATION

A 58-31A

GROUP	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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VOLKOVA, Z.

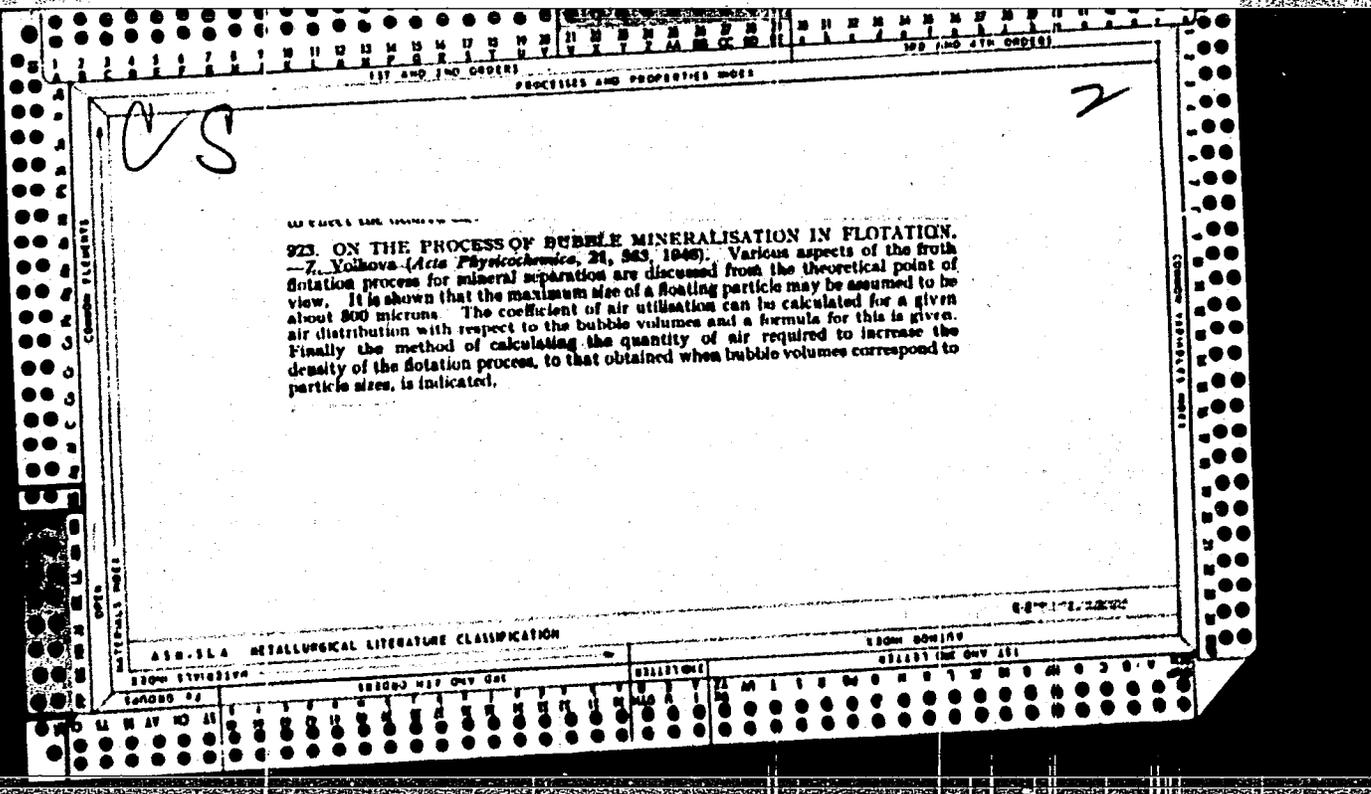
C.A

4

The laws of adhesion in flotation. The process of bubble mineralization. Z. Volkova (Moscow Pedagogical Inst.). *Acta Physicochim. U.R.S.S.* 21, 171-80 (1948); *Ch. C.A.* 40, 2711'.—On the basis of previously established relations it has become possible to find the vol. distribution of air bubbles most favorable to the flotation of a given mineral powder and to make an estimate of the probability of bubble mineralization. It was found by expts. that this depends to a large extent on the wettability of the mineral surface and on the time required for the appearance of a 3-phase boundary outline on the surface of the particle. The max. bubble vol. for a particle of given size was detd. by the beginning of "neck" formation which shows up as a point of inflection on the meridian sections of the bubble when viewed through a horizontal microscope. An estimate was also made of the stability of bubble surfaces by having the bubbles adhere to the top of a truncated cone machined from the graphite core of a pencil and covered with a thin film of paraffin or polystyrene.

H. B. van Klooster

9-27-54
mjk



VOLKOVA, Z.

USSR/Physics
Flotation
Kinetic Theory

Nov/Dec 1946

"The Laws Governing the Process of Separation of Solids of Different Floatability," Z. Volkova, Dept Phys, Moscow Pedagogical Inst, 9 pp

"Acta Physicochimica URSS" Vol XXI, No 6 p.1105

Proposes methods of calculating: minimum quantity of air required for flotation of a given solid; coefficient of air utilization under different conditions of froth formation in the pulp; time of transfer of the solid particles onto surface of bubbles; and coefficient of separation of solids of different floatability. Received, 25 Nov 1945.

5/186

181 AND 182 CRYSTALS
1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX

B

MINERALIZATION PROCESS IN AIR BUBBLES DURING FLOTATION
Z. VOLKOVA. Reports of the Academy of Sciences of
U.S.S.R., v. 61, no. 1, 1948, p. 415-418.

COMMON ELEMENTS
MATERIALS INDEX
METALLURGY

ABB-SLA METALLURGICAL LITERATURE CLASSIFICATION

GROUPS
LETTERS

GROUPS	LETTERS
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1. VOLKOVA, Z.V. ZOTOVA, R. G.
2. USSR (600)
4. Mineralogy
7. Investigating the surface properties of minerals (Abstract) Izv. Glav.upr.geol.fon.
No. 2, 1947

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified

VOIKOVA, Z.

USSR/Flotation

Feb 1947

"On the Laws Governing the Separation Process of Solids of Different Floatability, and the Content of the Floated Solid in the Concentrate and Its Recovery," Z. Volkova, 7 pp

"Acta Physicochimica" Vol XXII, No 2 - p. 331

A method of estimation of the floatability to permit investigation of the dependence of the coefficient of separation on the recovery for given initial conditions of the froth-flotation process.

9T18

PROCESSES AND PROPERTIES INDEX

1

B

*18. Ability of Solid Substances to Respond to Flotation; Flotation Relationships. (In Russian.) Z. V. Volkova. *Zhurnal Fizicheskoi Khimii* (Journal of Physical Chemistry), v. 22, Jan. 1948, p. 121-128.

Proposes a formula for determination of the probability of the mineralization of air bubbles. This ability is a function of the average volume of the bubbles. It reaches a maximum for a certain bubble volume, and then decreases to zero for maximum bubble volume. The higher the value of the function, and the wider the range of volumes between the maximum volume and maximum function, the higher the ability to be floated.

All-Union Inst. of Mineral Res.

A I R - S L A METALLURGICAL LITERATURE CLASSIFICATION

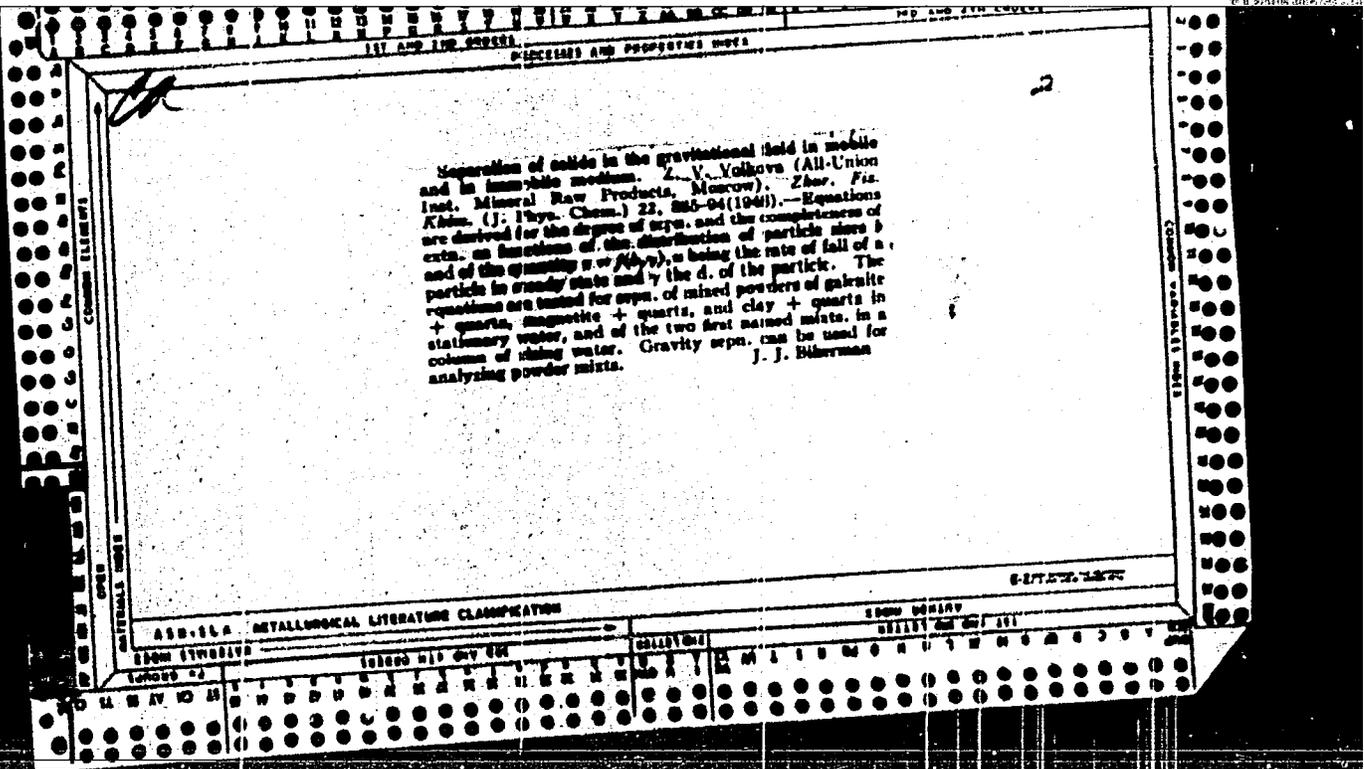
FROM IONIANIS

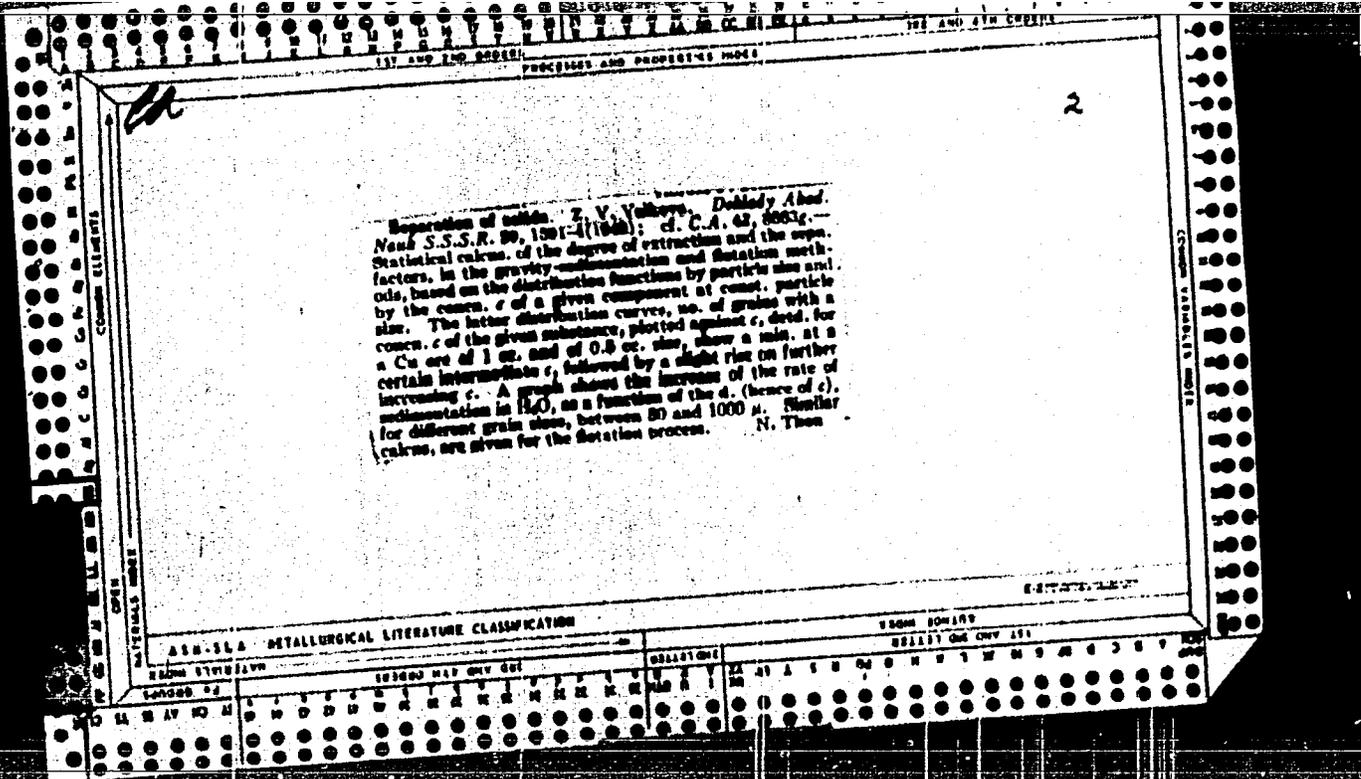
QUALITY CONTROL

MAYOROVA, I.P.; BLAGOVFSHCHEMSKIY, V.A.; VOLKOVA, Z.M.; ORLOVA, N.G.

Dynamics of phosphorus compounds in the process of the development
of *Clostridium perfringens*. *Biokhimiya* 30 no.4:675-680 J1-Ag '65.
(MIRA 18:8)

1. Instityt epidemiologii i mikrobiologii imeni N.F. Gamalei
AMN SSSR, Moskva.





PROCESSES AND PROPERTIES INDEX

1

B

Separability of Solid Substances. (In Russian.) Z. V. Volkova and I. V. Smirnova. *Zhurnal Prikladnoi Khimii* (Journal of Applied Chemistry), v. 22, Sept. 1949, p. 965-969.

Theoretically investigates above, defining "separability" as completeness of partition, i.e., by sufficiently small content of particles of heterogeneous composition in mixtures of powders obtained by grinding. Probability of formation of particles of heterogeneous composition and degree of exposure of included and including phases is calculated on the basis of distribution function of powder particles and of grains included in the ground body.

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND CROSS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	3RD AND 4TH CROSS A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	5TH AND 6TH CROSS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	7TH AND 8TH CROSS A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	9TH AND 10TH CROSS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	11TH AND 12TH CROSS A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	13TH AND 14TH CROSS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	15TH AND 16TH CROSS A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	17TH AND 18TH CROSS 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	19TH AND 20TH CROSS A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
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CA

The probability characteristics of separation of solids. *Zhur. V. Volkova* (Moscow City Teachers' Inst.). *Zhur. Priklad. Khim.* 22, 1231-6(1949); cf. preceding abstr. and C.I. 43, 465d.—A more detailed evaluation is given of separability based on calcul. of separable components in the concentrate, degree of recovery of separable components in the concentrate, and content of sepd. component in the concentrate. Particles of heterogeneous compn. are formed at the phase boundaries in the solid body. Math. formulas are given for calcul. of area of a particle at the phase boundary and for calcul. of probability of sepn. of a particle from the phase boundary. There are also formulas for calcul.: (1) vol. of particles of sizes from 0 to b_1 ; (2) probability of sepn. of granules of sizes from 0 to b_1 ; (3) probability of sepn. of particles of sizes from b_1 to $(b_1 + \Delta b)$ with content of separable component from c to $(c + \Delta c)$ for granules of size $r > b_1$, etc. Calcs. were carried out for 3 powder fractions having av. particle sizes 0.380 mm., 0.200 mm., and 0.050 mm. The probability values obtained are reported in table form. Gladys S. Macy

CA

2

Distribution of disperse systems according to particle size and the content of the included phase for inclusions of various shapes. *Z. V. Khokhlova* (Ury Prilaga Inst. Moscow), *Kolloid. Zh.* 13, 216 21(1951); cf. *Zhur. Priklad. Khim.* 22, 1231(1949).—If a solid consists of a matrix (I) and inclusions (II), and if I and II behave equally when comminuted, then comminution of the solid gives largest no. N of eq. particles of I and II when II are present as flat plates, a smaller N when II are cylinders, and a smaller still when II are spheres. The frequency f of particles eqvly $c\%$ of II initially has a max. at some small c ; this max. is sharper, the coarser the powder obtained and the more isometric are the inclusions. If f is known for particles of different sizes, the size and shape of II in the original solid can be calculated. *J. I. Biherman*.

CA

The separability of solid bodies. Z. V. Volkova and I. V. Smirnova (Moscow State Teachers' Inst.). *Zh. Priklad. Khim.* 22, 965-9 (1951).—The efficiency of sepn. by grinding of the components of a heterogeneous solid depends on the degree of exposure (d.e.) of the components. A math. derivation of the formulas is given for calc. degrees of exposure. The formulas derived for d.e. of included phase f_i and of including phase f_s are resp. $f_i = n[(1/n) - W_1]$ and $f_s = [n/(n-1)]\{[(n-1)n] - W_1\}$, where n is the ratio of vol. of solid body to vol. of included phase, W_1 is the probability of transition of included phase to particles of heterogeneous compn., and W_2 is the probability of transition of including phase to particles of heterogeneous compn. The d.e. of included phase does not depend on its content in the heterogeneous solid, but the d.e. of including phase increases sharply with decreasing content of included phase. The d.e. of both the phases depends on the form of the distribution function of the including grains. It is found that for a decreasing content of very fine including grains the values of f_i and f_s increase. For increasing values of k (the ratio of including grain sizes to powder particle sizes) the d.e. of both phases increases. For increasing values of n (the ratio of vol. of the solid body to the vol. of included phase) the d.e. of including phase sharply increases. G. S. Macy

VOLKOVA, Z.V.

Chemical Abst.

Vol. 48 No. 9

May 10, 1954

General and Physical Chemistry

①
Distribution of inclusions of an inhomogeneous solid in
the disperse systems obtained from it. Z. V. Volkova.
Colloid J. (U.S.S.R.) 14, 171-4 (1952) (Engl. translation).
See C.A. 45, 8463b.

H. L. H.

11-9-54
max

VOLKOV, E. V.

13838* (Conformity in Distribution of Bubble Volume and Solid Particle Size During the Process of Formation of Aggregates.) O soovetstviil-raspredelenii razmerov puzyr'kov i chastits (verdykh tel v protsessе obrazovaniia iz nikh agregatov. Z. V. Volkov, Kolloidnyi Zhurnal, v. 18, no. 2, Mar-Apr. 1956.)

Proposed method calculates transfer of solid particles into froth for arbitrary distribution. Graphs, table, 4 ref.

VOLKOVA, Z. M.

"Epizootological Fascioliasis of Sheep in Moscovskaya Oblast."
Cand Vet Sci, All-Union Inst of Helminthology imeni Academician K. I.
Skryabin, Min Agriculture USSR, Moscow, 1955. (KL, No 10, Mar 55)

SO: Sum. No. 670; 29 Sep 55--Survey of Scientific and Technical
Dissertations Defended at USSR Higher Educational Institutions (15)

VOLKOVA, Z.V.

The process of formation of aggregates from bubbles and solid particles
in V.I. Klassen and V.A. Mokrousov's book "Introduction to the theory of
flotation" Koll. zhur. 17 no. 4: 328-331 J1-Ag'55. (MIRA 8:11)
(Flotation) (Klassen, V.I.) (Mokrousov, V.A.)

КОЛЛОИДЫ

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The process of formation of aggregates from bubbles and solid particles, as described in V. A. Klassen's book "Introduction to the theory of flotation." *Kolloid Zhur.* 18, 120-1 (1956).—Reply to R. V. Vukobratovic, 4500g).
J. J. Bikerman

PM JJA

AVKSENT'YEV, S.I., dots.; VOIKOVA, Z.V., prof.; KAPUSTIN, A.P., prof.;
VOLOCHAK, V.L., tekhn. red.

[Programs of pedagogical institutes; general physics for physics
and mathematics faculties; major: physics] Programmy pedagogiche-
skikh institutov; obshchaya fizika dlia fiziko-matematicheskikh
fakul'tetov (spetsial'nost' - fizika). Moskva, Gos. uchebno-
pedagog. izd-vo M-va prosv. RSFSR, 1958. 20 p. (MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i
srednikh pedagogicheskikh uchebnykh zavedeniy.
(Physics--Study and teaching)

AVKSEMYT'YEV, S.I., dots.; VOLKOVA, Z.V., prof.; KAFUSTIN, A.P., prof.;
VOLCHNIK, V.L., tekhn. red.

[Programs of pedagogical institutes; general physics for physics
and mathematics faculties; major: mathematics and physics] Program-
my pedagogicheskikh institutov; obshchaya fizika dlia fiziko-
matematicheskikh fakul'tetov (spetsial'nost' - matematika i fizika).
Moskva, Gos. uchebno-pedagog. izd-vo M-va prosv. RSFSR, 1958. 21 p.
(MIRA 11:9)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye vysshikh i
srednikh pedagogicheskikh uchebnykh zavedeniy.
(Physics--Study and teaching)

AUTHOR: Volkova, Z.V., Professor 3-58-3-5/32

TITLE: New, Progressive Features in Teaching General Scientific Subjects (Novoye, progressivnoye - v prepodavaniiye obshche-nauchnykh distsiplin) A Tested Method of Practical Training in Physics (Proverennaya metodika fizicheskogo praktikuma)

PERIODICAL: Vestnik Vysshey Shkoly, 1958, Nr 3, pp 24 - 26 (USSR)

ABSTRACT: This article criticizes the present method of practical training in physics at Soviet higher schools, and explains how the Moskovskiy gorodskoy pedagogicheskiy institut imeni V.P. Potëmkin (Moscow City Pedagogical Institut imeni V.P. Potëmkin) has reorganized training during the last 7 years. A new manual of practical training in physics by Yu.M. Popko and L.A. Knyazeva under the editorship of Z.V. Volkova, now in print, stresses the importance of raising the students initiative in carrying out projects in physics.

ASSOCIATION: Moskovskiy gorodskoy pedagogicheskiy institut imeni V.P. Potëmkin (Moscow City Pedagogical Institute imeni V.P. Potëmkin)

AVAILABLE: Library of Congress
Card 1/1

VOLKOVA, Z.V.; SMOL'NIKOV, V.P.

Mechanism of the prolonged anesthetic sleep produced with the
Shein-Ashman mixture. Vest.AMN SSSR 17 no.8:56-60 '62.
(MIRA 15:12)

1. Laboratoriya anesteziologii Instituta serdechno-sosudistoy
khirurgii AMN SSSR i laboratoriya radioaktivnoy indikatsii II
Moskovskogo meditsinskogo instituta imeni N.I.Pirogova.
(ANESTHETICS) (THIOPENTAL)

VOLKOVA, Z.V.

Shein's effect produced with 3% ether. Vest.AMN SSSR 17 no.8:
60-64 '62. (MIRA 15:12)

1. Laboratoriya anesteziologii Instituta eksperimental'noy i
klinicheskoy onkologii AMN SSSR.
(ETHER (ANESTHETIC)) (THIOPENTAL)

VOLKOVA, Z.V.

Statistical regularities of separation processes for solids.
Effect of the stirring intensity on the formation of aggregations of
air bubbles and solid particles. Uch.zap.Mosk.gor.ped.inst.
85:5-14 '58. (MIRA 14:10)

(Ore dressing)

VOLKOVA, Z.V.

Distribution of solids along the height of the sediment in media
both at rest and subjected to agitation. Uch.zap.Mosk.gor.ped.inst.
85:15-27 '58. (MIRA 14:10)

(Precipitation (Chemistry))

VOLKOVA, Z.V.

Methods of teaching physics in institutions of higher learning.
Uch.zap.Mosk.gor.ped.inst. 85:75-84 '58. (MIRA 14:10)
(Physics--Study and teaching)

VOLEGOVA, Z.V. Cand Med Sci -- (diss) "Pharmacodynamics of aprocphen in
norm and in experimental atherosclerosis. (Experimental study)." Mos,
1952. 10 pp (Second Mos State Med Inst in N.I. Pirogov). 250 copies
(HL;39-59, 107)

75

VOLKOVA, Z.V.

On pharmacology of aprophen. Farm. i toks. 22 no.4:345-352 J1-Lg '59.
(MIRA 13:1)

1. Kafedra farmakologii (zav. - prof. V.V. Vasil'yeva) II Moskovskogo
gosudarstvennogo meditsinskogo instituta imeni N.I. Pirogova.
(SPASMOLYTICS pharmacol.)
(PROPIONATES pharmacol.)

POPKO, Yuriy Mikhaylovich, kand.pedagog.nauk; KNYAZEVA, Lora Aleksandrovna, kand.pedagog.nauk; VOLKOVA, Z.V., prof., nauchnyy red.; DROZHZHIN, Yu.M., red.; SMIRNOV, G.I., tekhn.red.

[Physics laboratory manual; textbook for students of the physics and mathematics faculties of pedagogical institutes] Rukovodstvo k praktikumu po fizike; uchebnoe posobie dlia studentov fiziko-matematicheskikh fakul'tetov pedagogicheskikh institutov. Pod red. Z.V.Volkovoi. Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, 1959. 442 p. (MIRA 13:1)

1. Sotrudniki kafedry obshchey fiziki Moskovskogo gorodskogo pedagogicheskogo instituta (for Popko, Knyazeva). (Physics--Laboratory manuals)

USPENSKAYA, O.S.; VOIKOVA-PAVLOVA, V.I.

Clinical aspects and surgery in the treatment of ripe neuroectodermal tumors of the frontoparasagittal region. Vop.neirokhir. 28 no.4:11-15 J1-Ag '64. (MIRA 18:2)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni Burdenko (dir. - prof. A.I. Arutyunov) AMN SSSR, Moskva.

VOLKOVA-FAVLOVA, V. L.

Brain - Tumors

Characteristics of the clinical course and surgical treatment of anglioreticuloma.
Vop. neurokhir., 16, no. 2, 1952.

Monthly List of Russian Accessions. Library of Congress, October 1952, UNCLASSIFIED.

YEGOROV, B.G., prof., zaslužhenny deyatel' nauki, otv.red.: VOLKOVA-PAVLOVA, red.; SAVITSKAYA, Ye.N., red.; SPIRIN, B.G., red.; OSHTU-MCV, V.M., red.; FILIPPICHEVA, N.A., red.; YABLONOVSKAYA, L.Ya., red.; KORNYANSKIY, G.P., red.; GRAZHDANINOV, N.A., tekhn.red.

[Research of the N.N.Burdenko Institute of Neurosurgery of the Academy of Medical Sciences of the U.S.S.R. from 1954 to 1958] Nauchnye raboty, vyshedshie iz instituta neirokhirurgii imeni akad. N.N. Burdenko AMN SSSR za 5 let, 1954-1958 gg. Pod red. B.G.Egorova. Moskva, 1959. 157 p. (MIRA 13:3)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut neyrokhirurgii.

(NERVOUS SYSTEM--SURGERY)

VOLKOVA-PAVLOVA, V.L., kand.med.nauk (Moskva)

Clinical characteristics of various types of adenomas of the hypophysis. Vop.neirokhir. 23 no.5:33-38 S-O '59. (MIRA 12:11)

1. Nauchno-issledovatel'skiy ordena Trudovogo Krasnogo Znameni institut neyrokhirurgii imeni akad. N.N. Burdenko AMN SSSR.
(ADENOMA)
(PITUITARY GLAND neoplasms)

TERYAN, K.G.; VOIKOVA-PAVLOVA, V.L.

Problem of anesthesia in cerebral surgery. Vopr. neurokhir. 17 no.3:
9-15 May-June 1953. (CML 25:1)

1. Of the Institute of Neurosurgery imeni Academician N. N. Burdenko
(Director -- Prof. B. G. Yegorov, Corresponding Member AMS USSR), Academy
of Medical Sciences USSR.

YOLKOVA-SHARAVS'KA, N.M.

DYACHENKO, S.S.; VOLKOVA-SHARAVS'KA, N.M.; MIZRUKHIN, I.A.

Effect of prolonged interrupted sleep on formation of agglutinins.
Medych.zhur.24 no.1:7-15 '54. (MLRA 8:10)

1. Kiivskiy medichnii institut im. akad. O.O.Bogomol'tsya, kafedry
mikrobiologii i psikiatrii.

(AGGLUTINATION,

eff. of prolonged sleep on agglutinin form)

(SLEEP, effects,

on agglutinin form)

Volkova, Z.D.

VOLKOVA, Z.D.; TYURINA, N.M.

Neurinoma of the oral cavity. Stomatologia no.1:49-50 Ja-F '55.

(MLRA 8:5)

1. Iz kafedry patologicheskoy anatomii (zav. prof. B.I.Migunov) i iz kafedry khirurgicheskoy stomatologii (zav. prof. A.I.Yevdokimov) Moskovskogo meditsinskogo i stomatologicheskogo instituta (dir. dotsent G.N.Beletskiy).

(MOUTH, neoplasms,
neuroma)

(NEUROMA,
mouth)

BABADAGLY, A.Kh., dotsent; VOLKOVA, Z.G.

Treatment of gynecological diseases at the Truskavets health resort with ozocerite associated with other factors. Akush.i gin. no.2:74-76 Mr-Ap '54.
(MIRA 7:6)

1. Iz akusheratko-ginekologicheskoy kliniki (zaveduyushchiy - professor A.V.Vikulov) L'vovskogo meditsinskogo instituta i kurorta Truskavets (direktor P.S.Fedotova).

(Gonitourinary organs--Diseases)

(Truskavets--Health resorts, watering places, etc.)

ca VOLKOVA, Z. A. 30

PROCESSES AND PROPERTIES OF

Mechanical methods for separating fabric from rubber in reclaiming rubber from tires. B. Ya. Obayevskii and Z. A. Volkova. *Extrakt Prom 4*, No. 15, 11 (1944).

The material was ground to pass a 10-15 on a 10-15 mm. sieve, and sepl. by (1) winnowing, (2) sieving and (3) a gram separator, which differs from a sieve in that material is sepl. according to the length of the particle. Best results were obtained by combining a gram separator and screens. The recovery of rubber was 80.8%, and it contained 1.5% of fabric. M. Huseh

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
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VOLKOVA, Z.A.

AYZENSHTAT, Ya.S.; VOLKOVA, Z.A.

Stimulating effect of supplementary pollination with immature
pollen of the maternal variety on the formation of hybrid fruit.
Vest. len. un. 9 no.4:33 Ap '54. (MIRA 8:6)
(Fertilization of plants) (Hybridization, Vegetable)

VOLKOVA, Z. S.

Cand Med Sci - (diss) "Etiology of chronic tonsillitis. Pathogenic properties of hemolytic and green streptococci and immunobiological displacements in persons ill with chronic tonsillitis." Novosibirsk, 1961. 12 pp; (Tomsk State Medical Inst); 200 copies; price not given; (KL, 5-61 sup, 201)

VOLKOVA, Z. S.

Chemical Abstr.
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

② U.S.S.R.
Syntheses of acetals of ethylene glycol, V. A. P. Shostakovskii, N. A. Gerasimova, and Z. S. Volkova. *Dokl. Akad. Nauk S.S.S.R., Div. Chem. Sci.* 1952, 817-22 (Engl. translation). -- See *Chem. Abstr.* 47, 10472f.

MF

VOIKOVA, Z.S.

4

/ Transformations of vinyl ethers. VIII. Transformations
of acetals of ethylene glycol. M. P. Shostakovskii, N. A.
Gerasimov, and Z. S. Volkova. *Bull. Acad. Sci. U.S.S.R.,*
Div. Chem. Sci. 1955, 89-95 (Engl. translation).—see C.A.
48, 3240f. H. L. H.

VOLKOVA Z. S.

Chemical Abst.
Vol. 48 No. 6
Mar. 25, 1954
Organic Chemistry

Transformation of vinyl alcohol. VIII. Transformation of acetals of vinyl alcohol. Z. S. Volkova, N. A. Gerbitskiy, and Z. S. Volkova. *Tr. Akad. Nauk S.S.S.R., Otdel. Khim. Nauk*, 1953, 47, 2682, 10477. $\text{H}(\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2)_2$ (I) (39 g.) with $(\text{CH}_3\text{OH})_2$ (II) (31 g.) contg. 1 drop 33% HCl gave a highly exothermic reaction after the addition of the 1st few drops; and after standing overnight yielded 82% $\text{MeCH}(\text{OCH}_2)_2$ (III), bp 42.6-2.0°, n_D^{20} 1.3981, d_4^{20} 0.9422, readily hydrolyzed by 2% H_2SO_4 . Heating 34 g. $\text{MeCH}(\text{OR})_2$, $\text{OCH}_2\text{CH}_2\text{OH}$, bp 39.2°, n_D^{20} 1.4180, d_4^{20} 0.9763, with 16 g. IA in an autoclave 10.5 hrs. at 200-20° gave 23.9 g. mixed II and EtOH, sept. after treatment with Na. Heating 124 g. IA and 70 g. $\text{Et}(\text{OCH}_2)_2\text{CH}_2$ in an autoclave 18 hrs. at 160-80° gave 10% II. $\text{MeCH}(\text{OR})_2\text{OCH}_2\text{CH}_2\text{OH}$ (24 g.) and 16.1 g. IA with 0.025 g. concd. HCl gave 67% II. Heating 34 g. $\text{MeCH}(\text{Et})\text{OCH}_2\text{CH}_2\text{OH}$ in autoclave 8 hrs. at 200-15° gave 27.2 g. II, some EtOH, and $\text{CH}_2=\text{CHOCCH}_2\text{CH}_2\text{OH}$. Heating 47 g. $\text{MeCH}(\text{OCH}_2\text{CH}_2\text{Cl})_2$ with 50 g. Na_2CO_3 in 500 ml. H_2O 4.25 hrs. at 140-50° and 5 hrs. at 180-90° in an autoclave gave much gas (28% O, 0.4% unreacted, 9.8% C), 34% II) and 250.7 g. liquid products, which gave 8.15 g. IA and much tar. Under milder conditions the results were the same, and $\text{MeCH}(\text{OCH}_2\text{CH}_2\text{OH})_2$ could not be obtained. To 27 g. $\text{O}(\text{C}_2\text{H}_5)_2\text{CH}_2$ (III) was added 1 drop concd. HCl, then 23 g. I and the mixt. allowed to stand 2 days after the exothermic reaction yielding 11.2% unreacted III and 18.5 g. II, as well as 3 g. viscous product decomp. on attempted distn. Similarly, 20.4 g. III and 18 g. $\text{EtOCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OEt}$ and 12 g. $\text{MeCH}(\text{OR})_2$; attempts to distill the residue failed, but a residue after repeated Et_2O extr. gave a viscous liquid, d_4^{20} 1.1937, n_D^{20} 1.4600, provisionally assigned the structure $\text{MeCH}(\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OCH}_2\text{CH}_2\text{OH})_2$. $(\text{C}_2\text{H}_5\text{OC-CH}_2)_2$ (29 g.) treated in 45 min. with 15.6 IA contg. a little HCl and the mixt. stirred 3.5 hrs. and let stand overnight, gave 87.7% II. G. M. Kosolupoff